

Sea Power 21

Projecting Decisive Joint Capabilities

By Admiral Vern Clark, U.S. Navy
Proceedings, October 2002



©BRIAN F. WOLFF/WWW.IIPNET.COM

Sea-based operations use revolutionary information superiority and dispersed, networked force capabilities to deliver unprecedented offensive power, defensive assurance, and operational independence to Joint Force Commanders.

Our Vision

The 21st century sets the stage for tremendous increases in naval precision, reach, and connectivity, ushering in a new era of joint operational effectiveness. Innovative concepts and technologies will integrate sea, land, air, space, and cyberspace to a greater extent than ever before. In this unified battlespace, the sea will provide a vast maneuver area from which to project direct and decisive power around the globe.

Future naval operations will use revolutionary information superiority and dispersed, networked force capabilities to deliver unprecedented offensive power, defensive assurance, and operational independence to Joint Force Commanders. Our Navy and its partners will dominate the continuum of warfare from the maritime domain—detering forward in peacetime, responding to crises, and fighting and winning wars.

By doing so, we will continue the evolution of U.S. naval power from the blue-water, war-at-sea focus of the "Maritime Strategy" (1986), through the littoral emphasis of ". . .

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 2002	2. REPORT TYPE		3. DATES COVERED 00-00-2002 to 00-00-2002		
4. TITLE AND SUBTITLE Sea Power 21: Projecting Decisive Joint Capabilities			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Department of the U.S. Navy, Washington, DC			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 16	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

From the Sea" (1992) and "Forward . . . from the Sea" (1994), to a broadened strategy in which naval forces are fully integrated into global joint operations against regional and transnational dangers.

To realize the opportunities and navigate the challenges ahead, we must have a clear vision of how our Navy will organize, integrate, and transform. "Sea Power 21" is that vision. It will align our efforts, accelerate our progress, and realize the potential of our people. "Sea Power 21" will guide our Navy as we defend our nation and defeat our enemies in the uncertain century before us.



- *Sea Strike*—Projecting Precise and Persistent Offensive Power
- *Sea Shield*—Projecting Global Defensive Assurance
- *Sea Basing*—Projecting Joint Operational Independence

Transformation for a Violent Era

The events of 11 September 2001 tragically illustrated that the promise of peace and security in the new century is fraught with profound dangers: nations poised for conflict in key regions, widely dispersed and well-funded terrorist and criminal organizations, and failed states that deliver only despair to their people.

These dangers will produce frequent crises, often with little warning of timing, size, location, or intensity. Associated threats will be varied and deadly, including weapons of mass destruction, conventional warfare, and widespread terrorism. Future enemies will

attempt to deny us access to critical areas of the world, threaten vital friends and interests overseas, and even try to conduct further attacks against the American homeland. These threats will pose increasingly complex challenges to national security and future warfighting.

Previous strategies addressed regional challenges. Today, we must think more broadly. Enhancing security in this dynamic environment requires us to expand our strategic focus to include both evolving regional challenges and transnational threats. This combination of traditional and emerging dangers means increased risk to our nation. To counter that risk, our Navy must expand its striking power, achieve information dominance, and develop transformational ways of fulfilling our enduring missions of sea control, power projection, strategic deterrence, strategic sealift, and forward presence.

Three fundamental concepts lie at the heart of the Navy's continued operational effectiveness: Sea Strike, Sea Shield, and Sea Basing. Sea Strike is the ability to project precise and persistent offensive power from the sea; Sea Shield extends defensive assurance throughout the world; and Sea Basing enhances operational independence and support for the joint force. These concepts build upon the solid foundation of the Navy-Marine Corps team, leverage U.S. asymmetric advantages, and strengthen joint combat effectiveness.

We often cite asymmetric challenges when referring to enemy threats, virtually assuming such advantages belong only to our adversaries. "Sea Power 21" is built on a foundation of American asymmetric strengths that are powerful and uniquely ours. Among others, these include the expanding power of computing, systems integration, a thriving industrial base, and the extraordinary capabilities of our people, whose innovative nature and desire to excel give us our greatest competitive advantage.

Sea Strike, Sea Shield, and Sea Basing will be enabled by ForceNet, an overarching effort to integrate warriors, sensors, networks, command and control, platforms, and weapons into a fully netted, combat force. We have been talking about network-centric warfare for a decade, and ForceNet will be the Navy's plan to make it an operational reality. Supported by ForceNet, Sea Strike, Sea Shield, and Sea Basing capabilities will be deployed by way of a Global Concept of Operations that widely distributes the firepower of the fleet, strengthens deterrence, improves crisis response, and positions us to win decisively in war.

Sea Strike: Projecting Precise and Persistent Offensive Power

Projecting decisive combat power has been critical to every commander who ever went into battle, and this will remain true in decades ahead. Sea Strike operations are how the 21st-century Navy will exert direct, decisive, and sustained influence in joint campaigns. They will involve the dynamic application of persistent intelligence, surveillance, and reconnaissance; time-sensitive strike; ship-to-objective maneuver; information operations; and covert strike to deliver devastating power and accuracy in future campaigns.

Information gathering and management are at the heart of this revolution in striking power. Networked, long-dwell naval sensors will be integrated with national and joint systems to penetrate all types of cover and weather, assembling vast amounts of information. Data provided by Navy assets—manned and unmanned—will be vital to establishing a comprehensive understanding of enemy military, economic, and political vulnerabilities. Rapid planning processes will then use this knowledge to tailor joint strike packages that deliver calibrated effects at precise times and places.

Sea Strike Impact

- Amplified, effects-based striking power
- Increased precision attack and information operations
- Enhanced warfighting contribution of Marines and Special Forces
- "24 / 7" offensive operations
- Seamless integration with joint strike packages

Sea Strike Capabilities

- Persistent intelligence, surveillance, and reconnaissance
- Time-sensitive strike
- Electronic warfare / information operations
- Ship-to-objective maneuver
- Covert strike

Future Sea Strike Technologies

- Autonomous, organic, long-dwell sensors
- Integrated national, theater, and force sensors
- Knowledge-enhancement systems
- Unmanned combat vehicles
- Hypersonic missiles
- Electro-magnetic rail guns
- Hyper-spectral imaging

Sea Strike: Action Steps

- Accelerate information dominance via ForceNet
- Develop, acquire, and integrate systems to increase combat reach, stealth, and lethality
- Distribute offensive striking capability throughout the entire force
- Deploy sea-based, long-dwell, manned and unmanned sensors
- Develop information operations as a major warfare area
- Synergize with Marine Corps transformation efforts
- Partner with the other services to accelerate Navy transformation

Knowledge dominance provided by persistent intelligence, surveillance, and reconnaissance will be converted into action by a full array of Sea Strike options—next-generation missiles capable of in-flight targeting, aircraft with stand-off precision weapons, extended-range naval gunfire, information operations, stealthy submarines, unmanned combat vehicles, and Marines and SEALs on the ground. Sovereign naval forces will exploit their strategic flexibility, operational independence, and speed of command to conduct sustained operations 24 hours per day, 7 days per week, 365 days per year.

Information superiority and flexible strike options will result in time-sensitive targeting with far greater speed and accuracy. Military operations will become more complicated as advanced intelligence, surveillance, and reconnaissance products proliferate. Expanded situational awareness will put massed forces at risk, for both friends and adversaries. This will compress timelines and prompt greater use of dispersed, low-visibility forces. Countering such forces will demand speed, agility, and streamlined information processing tied to precision attack. Sea Strike will meet that challenge.

The importance of information operations will grow in the years ahead as high-technology weapons and systems become more widely available. Information operations will mature into a major warfare area, to include electronic warfare, psychological operations, computer network attack, computer network defense, operations security, and military deception. Information operations will play a key role in controlling crisis escalation and preparing the battlefield for subsequent attack. This U.S. asymmetry will be a critical part of Sea Strike.

When we cannot achieve operational objectives from over the horizon, our Navy-Marine Corps team moves ashore. Using advanced vertical and horizontal envelopment techniques, fully netted ground forces will maneuver throughout the battlespace, employing speed and precision to generate combat power. Supported by sea bases, we will exploit superior situational awareness and coordinated fires to create shock, confusion, and chaos in enemy ranks. Information superiority and networking will act as force multipliers, allowing agile ground units to produce the warfighting impact traditionally provided by far heavier forces, bringing expeditionary warfare to a new level of lethality and combat effectiveness.

Sea Strike capabilities will provide Joint Force Commanders with a potent mix of weapons, ranging from long-range precision strike, to covert land-attack in anti-access environments, to the swift insertion of ground forces. Information superiority will empower us to dominate timelines, foreclose adversary options, and deny enemy sanctuary. Sea Strike operations will be fully integrated into joint campaigns, adding the unique independence, responsiveness, and on-scene endurance of naval forces to joint strike efforts. Combined sea-based and land-based striking power will produce devastating effects against enemy strategic, operational, and tactical pressure points—resulting in rapid, decisive operations and the early termination of conflict.

Sea Shield: Projecting Global Defensive Assurance

Traditionally, naval defense has protected the unit, the fleet, and the sea lines of communication. Tomorrow's Navy will do much more. Sea Shield takes us beyond unit and task-force defense to provide the nation with sea-based theater and strategic defense.

Sea Shield will protect our national interests with layered global defensive power based on control of the seas, forward presence, and networked intelligence. It will use these strengths to enhance homeland defense, assure access to contested littorals, and project defensive power deep inland. As with Sea Strike, the foundation of these integrated operations will be information superiority, total force networking, and an agile and flexible sea-based force.

Homeland defense will be accomplished by a national effort that integrates forward-deployed naval forces with the other military services, civil authorities, and intelligence and law-enforcement agencies. Working with the newly established Northern Command, we will identify, track, and intercept dangers long before they threaten our homeland. These operations will extend the security of the United States far seaward, taking advantage of the time and space afforded by naval forces to shield our nation from impending threats.

Sea Shield Impact

- Projected defense for joint forces and allies ashore
- Sustained access for maritime trade, coalition building, and military operations
- Extended homeland defense via forward presence and networked intelligence
- Enhanced international stability, security, and engagement

Sea Shield Capabilities

- Homeland defense
- Sea / littoral superiority
- Theater air missile defense
- Force entry enabling

Future Sea Shield Technologies

- Interagency intelligence and communications reach-back systems
- Organic mine countermeasures
- Multi-sensor cargo inspection equipment
- Advanced hull forms and modular mission payloads
- Directed-energy weapons
- Autonomous unmanned vehicles
- Common undersea picture
- Single integrated air picture
- Distributed weapons coordination
- Theater missile defense

Sea Shield: Action Steps

- Expand combat reach
- Deploy theater missile defense as soon as possible
- Create common operational pictures for air, surface, and subsurface forces
- Accelerate the development of sea-based unmanned vehicles to operate in every environment
- Invest in self-defense capabilities to ensure sea superiority

Maritime patrol aircraft, ships, submarines, and unmanned vehicles will provide comprehensive situational awareness to cue intercepting units. When sent to investigate a suspicious vessel, boarding parties will use advanced equipment to detect the presence of contraband by visual, chemical, and radiological methods. Forward-deployed naval forces will also protect the homeland by engaging inbound ballistic missiles in the boost or mid-course phase, when they are most vulnerable to interception. In addition, our nuclear-armed Trident ballistic missile submarine force will remain on silent patrol around the world, providing the ultimate measure of strategic deterrence. These highly

survivable submarines are uniquely powerful assets for deterring aggressors who would contemplate using weapons of mass destruction.

Achieving battle-space superiority in forward theaters is central to the Sea Shield concept, especially as enemy area-denial efforts become more capable. In times of rising tension, pre-positioned naval units will sustain access for friendly forces and maritime trade by employing evolving expeditionary sensor grids and advanced deployable systems to locate and track enemy threats. Speed will be an ally as linked sensors, high-speed platforms, and improved kill vehicles consolidate area control, including the location and neutralization of mines via state-of-the-art technology on dedicated mine warfare platforms and battle group combatants. Mission-reconfigurable Littoral Combat Ships, manned and unmanned aviation assets, and submarines with unmanned underwater vehicles will gain and maintain the operational advantage, while sea-based aircraft and missiles deliver air dominance. The result will be combat-ready forces that are prepared to "climb into the ring" to achieve and sustain access before and during crises.

Perhaps the most dramatic advancement promised by Sea Shield will be the ability of naval forces to project defensive power deep overland, assuring friends and allies while protecting joint forces ashore. A next-generation long-range surface-to-air Standard Missile, modernized E-2 Hawkeye radar, and Cooperative Engagement Capability will combine to extend sea-based cruise missile defense far inland. This will reinforce the impact of sea-based ballistic missile defense and greatly expand the coverage of naval area defense. These capabilities represent a broadened mission for our Navy that will lessen the defensive burden on land forces and increase sea-based influence over operations ashore.

The importance of Sea Shield to our nation has never been greater, as the proliferation of advanced weapons and asymmetric attack techniques places an increasing premium on the value of deterrence and battlespace dominance. Sea Shield capabilities, deployed forward, will help dissuade aggressors before the onset of conflict. In addition, Sea Shield will complement Sea Strike efforts by freeing aviation forces previously devoted to force defense, allowing them to concentrate on strike missions and generate far greater offensive firepower from the fleet. In sum, Sea Shield will enhance crisis control, protect allies and joint forces ashore, and set the stage for combat victory—providing a powerful new tool for joint combatant commanders in this dangerous age.

Sea Basing: Projecting Joint Operational Independence

Operational maneuver is now, and always has been, fundamental to military success. As we look to the future, the extended reach of networked weapons and sensors will tremendously increase the impact of naval forces in joint campaigns. We will do this by exploiting the largest maneuver area on the face of the earth: the sea.

Sea Basing serves as the foundation from which offensive and defensive fires are projected—making Sea Strike and Sea Shield realities. As enemy access to weapons of mass destruction grows, and the availability of overseas bases declines, it is compelling

both militarily and politically to reduce the vulnerability of U.S. forces through expanded use of secure, mobile, networked sea bases. Sea Basing capabilities will include providing Joint Force Commanders with global command and control and extending integrated logistical support to other services. Afloat positioning of these capabilities strengthens force protection and frees airlift-sealift to support missions ashore.

Sea Basing Impact

- Pre-positioned warfighting capabilities for immediate employment
- Enhanced joint support from a fully netted, dispersed naval force
- Strengthened international coalition building
- Increased joint force security and operational agility
- Minimized operational reliance on shore infrastructure

Sea Basing Capabilities

- Enhanced afloat positioning of joint assets
- Offensive and defensive power projection
- Command and control
- Integrated joint logistics
- Accelerated deployment and employment timelines

Future Sea Basing Technologies

- Enhanced sea-based joint command and control
- Heavy equipment transfer capabilities
- Intra-theater high-speed sealift
- Improved vertical delivery methods
- Integrated joint logistics
- Rotational crewing infrastructure
- International data-sharing networks

Sea Basing: Action Steps

- Exploit the advantages of sea-based forces wherever possible
- Develop technologies to enhance on-station time and minimize maintenance requirements
- Experiment with innovative employment concepts and platforms
- Challenge every assumption that results in shore basing of Navy capabilities

Netted and dispersed sea bases will consist of numerous platforms, including nuclear-powered aircraft carriers, multi-mission destroyers, submarines with Special Forces, and maritime pre-positioned ships, providing greatly expanded power to joint operations. Sea-

based platforms will also enhance coalition-building efforts, sharing their information and combat effectiveness with other nations in times of crisis.

Sea Basing accelerates expeditionary deployment and employment timelines by pre-positioning vital equipment and supplies in-theater, preparing the United States to take swift and decisive action during crises. We intend to develop these capabilities to the fullest extent. Strategic sealift will be central to this effort. It remains a primary mission of the U.S. Navy and will be critical during any large conflict fought ashore. Moreover, we will build pre-positioned ships with at-sea-accessible cargo, awaiting closure of troops by way of high-speed sealift and airlift. Joint operational flexibility will be greatly enhanced by employing pre-positioned shipping that does not have to enter port to offload.

Twenty-first-century operations will require greater efficiencies through the development of joint logistical support. This will include the provisioning of joint supplies and common ammunition, and the completion of critical repairs from afloat platforms. Providing these capabilities to on-scene commanders will significantly increase operational effectiveness and constitute a valuable addition to strategic basing support provided by friends and allies around the world.

Beyond its operational impact, the Sea Basing concept provides a valuable tool for prioritizing naval programs. Sea-based forces enjoy advantages of security, immediate employability, and operational independence. All naval programs should foster these attributes to the greatest extent feasible. This means transforming shore-based capabilities to sea-based systems whenever practical, and improving the reach, persistence, and sustainability of systems that are already afloat.

ForceNet: Enabling 21st Century Warfare

ForceNet is the "glue" that binds together Sea Strike, Sea Shield, and Sea Basing. It is the operational construct and architectural framework for naval warfare in the information age, integrating warriors, sensors, command and control, platforms, and weapons into a networked, distributed combat force.

ForceNet will provide the architecture to increase substantially combat capabilities through aligned and integrated systems, functions, and missions. It will transform situational awareness, accelerate speed of decision, and allow us to greatly distribute combat power. ForceNet will harness information for knowledge-based combat operations and increase force survivability. It will also provide real-time enhanced collaborative planning among joint and coalition partners.

ForceNet Impact

- Connected warriors, sensors, networks, command and control, platforms, and weapons
- Accelerated speed and accuracy of decision
- Integrated knowledge to dominate the battlespace

ForceNet Capabilities

- Expeditionary, multi-tiered, sensor and weapons grids
- Distributed, collaborative command and control
- Dynamic, multi-path and survivable networks
- Adaptive / automated decision aids
- Human-centric integration

Using a total system approach, ForceNet will shape the development of integrated capabilities. These include maritime information processing and command and control components that are fully interoperable with joint systems; intelligence, surveillance, and reconnaissance fusion capabilities to support rapid targeting and maneuver; open systems architecture for broad and affordable interoperability; and safeguards to ensure networks are reliable and survivable. ForceNet also emphasizes the human factor in the development of advanced technologies. This philosophy acknowledges that the warrior is a premier element of all operational systems.

Today, ForceNet is moving from concept to reality. Initial efforts will focus on integrating existing networks, sensors, and command and control systems. In the years ahead, it will enable the naval service to employ a fully netted force, engage with distributed combat power, and command with increased awareness and speed as an integral part of the joint team.

Global Concept of Operations

"Sea Power 21" will be implemented by a Global Concept of Operations that will provide our nation with widely dispersed combat power from platforms possessing unprecedented warfighting capabilities. The global environment and our defense strategy call for a military with the ability to respond swiftly to a broad range of scenarios and defend the vital interests of the United States. We must dissuade, deter, and defeat both regional adversaries and transnational threats.

The Global Concept of Operations will disperse combat striking power by creating additional independent operational groups capable of responding simultaneously around the world. This increase of combat power is possible because technological advancements are dramatically transforming the capability of our ships, submarines, and aircraft to act as power projection forces, netted together for expanded warfighting effect.

Impact of Global Concept of Operations

- Widely distributed, fully netted striking power to support joint operations
- Increased presence, enhanced flexibility, and improved responsiveness
- Task-organized to deter forward, respond to crises, and win decisively

The results will be profound. Naval capability packages will be readily assembled from forward-deployed forces. These forces will be tailored to meet the mission needs of the Joint Force Commander, complementing other available joint assets. They will be sized to the magnitude of the task at hand. As a result, our Navy will be able to respond simultaneously to a broad continuum of contingencies and conflict, anywhere around the world. The Global Concept of Operations will employ a flexible force structure that includes:

- Carrier Strike Groups that provide the full range of operational capabilities. Carrier Strike Groups will remain the core of our Navy's warfighting strength. No other force package will come close to matching their sustained power projection ability, extended situational awareness, and combat survivability.
- Expeditionary Strike Groups consisting of amphibious ready groups augmented with strike-capable surface warships and submarines. These groups will prosecute Sea Strike missions in lesser-threat environments. As our operational concepts evolve, and new systems like Joint Strike Fighter deliver to the fleet, it will be advantageous to maximize this increased aviation capability. New platforms being developed for Expeditionary Strike Groups should be designed to realize this warfighting potential.
- Missile-defense Surface Action Groups will increase international stability by providing security to allies and joint forces ashore.
- Specially modified Trident submarines will provide covert striking power from cruise missiles and the insertion of Special Operations Forces.
- A modern, enhanced-capability Combat Logistics Force will sustain the widely dispersed fleet.

The Global Concept of Operations requires a fleet of approximately 375 ships that will increase our striking power from today's 12 carrier battle groups, to 12 Carrier Strike Groups, 12 Expeditionary Strike Groups, and multiple missile-defense Surface Action Groups and guided-missile submarines. These groups will operate independently around the world to counter transnational threats and they will join together to form Expeditionary Strike Forces—the "gold standard" of naval power—when engaged in regional conflict.

This dispersed, netted, and operationally agile fleet, as part of the joint force, will deliver the combat power needed to sustain homeland defense, provide forward deterrence in four theaters, swiftly defeat two aggressors at the same time, and deliver decisive victory in one of those conflicts. Employment of sovereign sea-based forces projecting offensive and defensive power across a unified battlespace will be central to every war plan.

Equally important, this 21st-century fleet will be positioned to immediately counter unexpected threats arising from any corner of the world.

The Global Concept of Operations will increase striking power, enhance flexibility, and improve responsiveness. It will fulfill our broadened strategy by sustaining the on-scene capabilities needed to fight and win.

Achieving Our Vision

We are developing Sea Strike, Sea Shield, and Sea Basing through a supporting triad of organizational processes: Sea Trial, Sea Warrior, and Sea Enterprise—initiatives that will align and accelerate the development of enhanced warfighting capabilities for the fleet.

Sea Trial: The Process of Innovation

Our enemies are dedicated to finding new and effective methods of attacking us. They will not stand still. To outpace our adversaries, we must implement a continual process of rapid concept and technology development that will deliver enhanced capabilities to our Sailors as swiftly as possible.

The Navy starts with the fleet, and Sea Trial will be fleet-led. The Commander, U.S. Fleet Forces Command, will serve as Executive Agent for Sea Trial, with Second and Third Fleet commanders sponsoring the development of Sea Strike, Sea Shield, and Sea Basing capabilities. These commanders will reach throughout the military and beyond to coordinate concept and technology development in support of future warfighting effectiveness. The Systems Commands and Program Executive Offices will be integral partners in this effort, bringing concepts to reality through technology innovation and the application of sound business principles.

The Navy Warfare Development Command, reporting directly to the Commander, U.S. Fleet Forces Command, will coordinate Sea Trial. Working closely with the fleets, technology development centers, and academic resources, the Navy Warfare Development Command will integrate wargaming, experimentation, and exercises to speed development of new concepts and technologies. They will do this by identifying candidates with the greatest potential to provide dramatic increases in warfighting capability. Embracing spiral development, these technologies and concepts will then be matured through targeted investment and guided through a process of rapid prototyping and fleet experimentation.

The Sea Trial process will develop enhanced warfighting capabilities for the fleet by more effectively integrating the thousands of talented and energetic experts, military and civilian, who serve throughout our Navy. Working together, we will fulfill the promise of "Sea Power 21."

Sea Trial Impact

- Fleet-led, enduring process of innovation
- Accelerated concept and technology development
- Enhanced headquarters / fleet alignment

Sea Warrior Impact

- Continual professional growth and development
- Improved selection and classification
- Interactive, web-based, incentivized detailing
- Networked, high-impact training

Sea Enterprise Impact

- Greater process efficiencies
- Divestment of non-core functions
- Organizational streamlining
- Enhanced investment in warfighting capability

Sea Warrior: Investing in Sailors

The Sea Warrior program implements our Navy's commitment to the growth and development of our people. It will serve as the foundation of warfighting effectiveness by ensuring the right skills are in the right place at the right time. Led by the Chief of Naval Personnel and Commander, Naval Education and Training Command, Sea Warrior will develop naval professionals who are highly skilled, powerfully motivated, and optimally employed for mission success.

Traditionally, our ships have relied on large crews to accomplish their missions. Today, our all-volunteer service is developing new combat capabilities and platforms that feature dramatic advancements in technology and reductions in crew size. The crews of modern warships are streamlined teams of operational, engineering, and information technology experts who collectively operate some of the most complex systems in the world. As optimal manning policies and new platforms reduce crew size further, we will increasingly need Sailors who are highly educated and expertly trained.

Introducing our people to a life-long continuum of learning is key to achieving our vision. In July 2001, we established Task Force EXCEL (Excellence through our Commitment to Education and Learning) to begin a revolution in training that complements the revolution in technologies, systems, and platforms for tomorrow's fleet. We are dedicated to improving our Sailors' professional and personal development, leadership, military education, and performance. Task Force EXCEL will apply information-age methods to accelerate learning and improve proficiency, including

advanced trainers and simulators, tailored skills training programs, improved mentoring techniques, and more effective performance measurement and counseling tools. This growth and development focus will revolutionize the way we train.

Another initiative central to Sea Warrior is Project SAIL (Sailor Advocacy through Interactive Leadership). Project SAIL is moving the Navy toward an interactive and incentivized distribution system that includes guaranteed schools for high-performing non-rated personnel, team detailing, Internet job listings, an information call center, and expanded detailee outreach. These actions will put choice in the process for both gaining commands and Sailors, and it will empower our people to make more informed career decisions.

Our goal is to create a Navy in which all Sailors—active and reserve, afloat and ashore—are optimally assessed, trained, and assigned so that they can contribute their fullest to mission accomplishment.

Sea Enterprise: Resourcing Tomorrow's Fleet

Among the critical challenges that we face today are finding and allocating resources to recapitalize the Navy. We must replace Cold War-era systems with significantly more capable sensors, networks, weapons, and platforms if we are to increase our ability to deter and defeat enemies.

Sea Enterprise, led by the Vice Chief of Naval Operations, is key to this effort. Involving the Navy Headquarters, the Systems Commands, and the Fleet, it seeks to improve organizational alignment, refine requirements, and reinvest savings to buy the platforms and systems needed to transform our Navy. Drawing on lessons from the business revolution, Sea Enterprise will reduce overhead, streamline processes, substitute technology for manpower, and create incentives for positive change. Legacy systems and platforms no longer integral to mission accomplishment will be retired, and we will make our Navy's business processes more efficient to achieve enhanced warfighting effectiveness in the most cost-effective manner.

Our Navy values operational excellence as its highest priority, and the vast majority of our training is devoted to sharpening tactical skills. However, it is also important that our leaders understand sound business practices so that we can provide the greatest return on the taxpayer's investment. To meet this need, we are creating educational opportunities to teach our leaders about executive business management, finance, and information technology. For example, the Center for Executive Education at the Naval Postgraduate School brings together rising flag officers and private industry decision-makers to discuss emerging business practices. We must also extend this understanding to the deckplates, so that our future leaders gain experience in a culture of strengthened productivity and continually measured effectiveness.

Increased inter-service integration also holds great promise for achieving efficiencies. For example, the Navy and Marine Corps tactical aviation integration plan will save billions

of dollars for both services, enhance our interoperability, and more fully integrate our people. Whether it is the U.S. Coast Guard's Deepwater Integrated Systems Program, new munitions being developed with the U.S. Air Force, joint experiments with the U.S. Army on high-speed vessels, or a new combined intelligence structure with the U.S. Marine Corps, we will share technologies and systems whenever possible. Such efforts must not just continue; they must expand. Savings captured by Sea Enterprise will play a critical role in the Navy's transformation into a 21st-century force that delivers what truly matters: increased combat capability.

Our Way Ahead

The 21st century is clearly characterized by dangerous uncertainty and conflict. In this unpredictable environment, military forces will be required to defeat a growing range of conventional and asymmetric threats.

"Sea Power 21" is our vision to align, organize, integrate, and transform our Navy to meet the challenges that lie ahead. It requires us to continually and aggressively reach. It is global in scope, fully joint in execution, and dedicated to transformation. It reinforces and expands concepts being pursued by the other services—long-range strike; global intelligence, surveillance, and reconnaissance; expeditionary maneuver warfare; and light, agile ground forces—to generate maximum combat power from the joint team.

"Sea Power 21" will employ current capabilities in new ways, introduce innovative capabilities as quickly as possible, and achieve unprecedented maritime power. Decisive warfighting capabilities from the sea will be built around:

- Sea Strike—expanded power projection that employs networked sensors, combat systems, and warriors to amplify the offensive impact of sea-based forces;
- Sea Shield—global defensive assurance produced by extended homeland defense, sustained access to littorals, and the projection of defensive power deep overland;
- Sea Basing—enhanced operational independence and support for joint forces provided by networked, mobile, and secure sovereign platforms operating in the maritime domain.

The powerful warfighting capabilities of "Sea Power 21" will ensure our joint force dominates the unified battlespace of the 21st century, strengthening America's ability to assure friends, deter adversaries, and triumph over enemies—anywhere, anytime.